

ABSTRACT

The present invention relates to a simple and efficient process for the preparation of pencil lead from the spent or waste pot liners of aluminum industries, said process comprising steps of crushing the liners into small sizes, adding chromic acid to the crushed liners, washing the reacted product with distilled water, thermally shock-treating the dried mass to obtain a fine flowing graphite powder, mixing the powder with binder(s), moistening the mixture with requisite amount of water to form a stiff dough, extruding the dough under pressure to obtain product in the form of a discs, heating the dried discs in an inert/reducing atmosphere in a furnace at temperature ranging between 400-1200°C for time duration ranging between 1 to 6 hours, and obtaining the pencil lead.